

TESS, Spitzer Find Potentially Volcano-Covered Earth-Size World

Astronomers discovered an Earth-size exoplanet, or world beyond our solar system, that may be carpeted with volcanoes. Called LP 791-18 d, the planet could undergo volcanic outbursts as often as Jupiter's moon Io, the most volcanically active body in our solar system.

They found and studied the planet using data from NASA's TESS (managed by Goddard) and retired Spitzer telescopes, as well as a suite of ground-based observatories.

LP 791-18 d sits on the inner edge of its habitable zone, the range of distances from a star where scientists hypothesize liquid water could exist on a planet's surface. If the world is as geologically active as the research team suspects, it could maintain an atmosphere and temperatures could drop enough on the planet's night side for water to condense.

Paper: www.nature.com/articles/s41586-023-05934-8

Story: www.nasa.gov/feature/goddard/2023/nasa-s-spitzer-tess-find-potentially-volcano-covered-earth-size-world



LP 791-18 d is shown here in an artist's concept. The gravitational tug from a more massive planet in the system, shown as a blue disk in the background, may result in internal heating and volcanic eruptions.